

Communication Strategy For EPA Meeting With San Juan County Commissioners On Questions Regarding NPL Listing Of Upper Animas River/Cement Creek

Issue:

The San Juan County, Colorado Commissioners have requested a meeting with EPA to discuss a number of questions including: "Where are we going?; How are we going to get there?; How long will it take?; How much will it cost?; Who is going to pay for it?; and If we don't like where we are when we get there, then what do we do?" The Commissioners have stated they are in a place where they really want to see something happening, and they seem to be wondering if NPL listing would make something happen.

Objectives/Strategy:

- Prepare to discuss and answer the list of questions the Commissioners sent to EPA;
- Share with the Commissioners EPA's recently acquired information regarding the state of water quality in the watershed; and

Background:

- On-going sampling shows that the water quality in Cement Creek and in the Animas River downstream of Silverton has continued to worsen since the cessation of the water treatment in 2003 at Gladstone.

In 2012, the EPA committed to looking within our authorities for ways to help address the worsening water quality in the watershed in a collaborative approach that is independent of proposing the site to the NPL. Thus, the EPA has not pursued designating the site as a Superfund site.

In support of this collaborative approach, EPA's Remedial Program has contributed resources for water quality sampling, ecological risk assessment and data analysis, and the Removal Program has contributed resources for the investigation of the Red-Bonita mine tunnel.

In addition, EPA has provided the State of Colorado Water Quality Division with Section 319 grant funds, which the State has awarded to the Animas River Stakeholders Group (ARSG) for various sampling and cleanup efforts in the watershed. While ARSG has accomplished a great deal with limited resources, they do not have sufficient resources to tackle the most severe and most costly sources of contamination.

In the past year, EPA has received letters from members of the public stating an interest in seeing the river cleaned up and questioning the effectiveness of both the EPA's and the State's efforts at the site. For this and other reasons, EPA may need to re-focus its efforts on community outreach and re-consider whether to pursue listing the site on the NPL. The EPA has agreed to meet with the San Juan County Commissioners at a meeting on April 23, 2014, to address their questions.

Messages:

- **General Messages:**
 - Water quality in the Animas River does not meet current water quality standards and, based on recent sampling, is continuing to deteriorate.
 - EPA Clean Water Act funded programs, even in combination with the Removal Program resources, are still insufficient to accomplish the level of cleanup required to improve water quality in the watershed.
 - Current progress has slowed down due to lack of sufficient funding for cleanup and the lack of consensus among the stakeholders regarding the desired environmental condition within the Animas River watershed at large.
 - The surface water and groundwater hydrologic systems and related sources of contamination are complex, which require an extensive level of sampling and investigative tools to be able to evaluate and select feasible and cost-effective solutions.
 - Compounding the understanding about the sources of contamination is the loading of naturally occurring metals in Cement Creek, Mineral Creek and the Animas River due to the highly mineralized geology of the area. Recognition of this compounding factor would be a part of any approach in determining what is feasible with regard to water quality improvements.
- **NPL Listing Process:**
 - EPA policy requires state support for listing. Support from County Commissioners and the community is needed before the Governor will send EPA a letter of State support for listing.
 - NPL Listing is a Federal rule-making process, and will take some time to prepare the listing package. EPA may need additional data that is more current to include in the documentation needed for the listing. It typically takes 1 to 2 years to place a site on the NPL, but with the support of the community, proposal to the NPL could occur in the spring of 2015 or, more likely, in the fall of 2015.
 - Depending on the goals of the cleanup, Superfund may need to address sources of contamination beyond just those in the Cement Creek watershed.
 - Some Superfund response activities can proceed on parallel tracks prior to final listing on the NPL. Removal actions, such as the bulkhead for the Red-Bonita mine tunnel, and Remedial Investigation and Feasibility Study activities can proceed assuming adequate funding. Enforcement activities also can proceed during the listing and response activities.
- **Superfund/Cleanup Process (Remedial Program):**
 - Given the complexity of this area, the Superfund process will take time to complete.
 - Three major components necessary for EPA to select a remedy at an NPL site include a Remedial Investigation, human health and ecological risk assessments, and a Feasibility Study.
 - The good news is that the monitoring and studies done to date will be helpful in completing the RI/FS and the ecological risk assessment.
 - Superfund requires EPA to evaluate risks to both the ecological environment, as well as to human health. Addressing human health concerns has been outside the scope of ARSG and the other programs that have focused on water quality.
- **Removal Program (also part of Superfund):**
 - The Removal Program can address more immediate problems, but the program is

generally limited to actions that cost less than \$2.0 million and can be performed in 12 months or less.

- Removal actions could be considered part of an overall remedy, but in this instance given the complexity of the problem, removal actions alone won't be sufficient.
- In selecting a remedy through the Remedial program, EPA must consider long-term operation and maintenance costs (O/M), a consideration that the Removal program is not required to address.
- It is likely that there will be O/M for most of the components of the remedy since even passive treatment systems can require "renewal" from time to time.
- In selecting a remedy that requires long-term O/M, the State must be willing to assume the costs for O/M absent other sources of funding such as a settlement with a PRP. The law prohibits EPA from performing or paying for O/M.
- Throughout the Superfund process, there are many opportunities for communities to engage in and influence the process.

- **Enforcement Process:** (Richard – Please provide a couple of bullets here.)
 - The Superfund Enforcement program gets Superfund sites cleaned up by finding the companies or people responsible for contamination at a site, and negotiating with them to do the clean up themselves, or to pay for the cleanup done by another party (i.e., EPA, state, or other responsible parties). This process may commence prior to and continue throughout the listing process.
 - If a responsible party does not agree to do the cleanup, EPA can issue an order to do certain work, or work with the Department of Justice to pursue the party through the federal court system. . Again, this process may commence prior to and continue throughout the listing process.
 - NPL listing is not required to pursue or to enter into settlement agreements with responsible parties.
- **Advantages of the NPL:**
 - Sites on the NPL are eligible to receive Superfund funding for the cleanup activities regardless of whether a settlement is reached with the responsible parties.
 - Without a listing, funding for cleanup would be limited to settlement amounts with the responsible parties.
 - Without a listing, federal budget considerations could make funding the cleanup a greater challenge.
 - Without a listing, the issue of funding for O/M of long-term remedy components could remain unresolved, which could limit implementation of the types of cleanup measures that would have the highest degree of improved water quality.
 - Without a listing, the community would be ineligible to receive Technical Assistance Grant support to participate in and better understand the cleanup process.

Next Steps:

WHAT	WHO	WHEN
Draft Responses to County Commissioner Questions	Upper Animas Team	April 8
Brief EPR Senior Management	Upper Animas Team	April 9
Brief RA?	Upper Animas Team or Martin?	Week of April 14
Reach out to other Federal Partners, State and Sunnyside **	EPR Mgmt.	Prior to April 23rd
Meet with San Juan County Commissioners	EPR Mgmt.	April 23
Notify ARSG of EPA meeting w/Commissioners	Schmittdiel/Wall	April 17 th @ monthly stakeholder's meeting

** Program met with BLM and USFS staff on April 2nd and updated them on the county commissioners concerns.

SOME OF THE ITEMS THE COMMISSIONERS WOULD LIKE TO DISCUSS INCLUDE:

1. What would be the role of the Commissioners, if it is decided to seek Superfund designation?

It is important to EPA to have state and local support when listing a site. EPA would then need a letter of support from the Governor before EPA would move forward with a listing proposal.

2. If there were a superfund designation, when could the cleanup work proceed?

EPA initiated the draft documentation for a targeted listing proposal for the Upper Cement Creek area in 2011. The documentation will need to be updated and go through a thorough review by EPA-HQ. Therefore, the earliest that EPA could propose this area on the NPL would be April, 2015 (these national rulemakings only occur 2 times per year, typically in April and October). EPA would require a letter of support from Gov Hickenlooper no later than January, 2015.

If EPA determines that it needs to collect additional data or to incorporate a substantial amount of the more recent data into the listing documentation, a more realistic proposal date would be October 2015. If EPA determines that it is preferable to propose a listing of a broader site, then additional time will likely be needed to compile additional data and incorporate it into the listing package.

Proposing a listing would not prevent EPA from continuing work on the Red and Bonita or on continued water quality studies during the listing process. Superfund activities prior to selection and construction of a remedy, such as remedial investigation, risk assessment and feasibility study, can start prior to proposal to and final placement on the NPL. The list is necessary for EPA to spend Superfund dollars on a remedial action.

3. Does the EPA have a preferred solution for cleaning up the site?

First, we need to define the site and the human health and ecological threats it might present. It would be premature to name a preferred solution without a more complete characterization of the problem. However, EPA's experience with mining sites throughout the country is that there are only a limited number of solutions. The trick is to determine the most cost-effective solution based on the situation and facts of the site.

EPA is required to develop and select remedies that are protective of human health and the environment, meet federal and state requirements, are effective in the long-term and are cost-effective, both to construct as well as to operate and maintain, and are acceptable to the State and to the public.

Based on our experience, if a primary goal of the remedy is to have water quality that reduces the risk to aquatic receptors and supports a diverse aquatic ecosystem in the Animas River, some type of water treatment may be required. Other measures may be required for protection of human health as well.

4. If EPA does not have a preferred alternative, what process would be used for making that determination and what role would the Stakeholders have in the process?

The RI/FS process includes procedures for identifying and evaluating remedial alternatives relative to a set of Superfund criteria. EPA values stakeholder input throughout the cleanup process. The Superfund process provides many formal and informal opportunities for communities to engage in and influence the process. We appreciate the time and effort that ARSG and other members of the community have made over the past 20 years to address the problems. ARSG can continue to provide valuable input in their role as a stakeholder that includes the public's role in the SF process. One of the criteria that EPA and the State must consider in making its decision is community input, which would include a local stakeholder group such as ARSG.

Explain the process based on our messages above: i.e., RI/FS, Risk Assessments, PP, ROD, etc.

5. If Sunnyside was involved in litigation, would the cleanup proceed or would it be halted until the litigation was completed?

If Sunnyside or any person challenged the listing, EPA would not have access to remedial action (cleanup) funds until the litigation was concluded and the listing was finalized. This lack of access to Superfund remedial action funds could delay cleanup. If the listing was finalized and then litigation concerning Sunnyside's or other parties' liability commenced, cleanup could proceed, assuming Superfund funding was available.

6. If available, an update on the status of the Sunnyside/EPA liability issue.

Under CERCLA, owners, operators, transporters and arrangers are the defined potentially liable parties at facilities at which there is a release or a threatened release of a hazardous substance that causes the incurrence of response costs. Present and past owners, operators, transporters or arrangers can be liable. Under the Clean Water Act, liability exists for present owners or operators that allow unpermitted discharges of pollutants. For entities that owned or operated mines, legal exposure exists, even if EPA does not pursue enforcement.

EPA is still reviewing documents submitted by Sunnyside and other potentially responsible parties and is evaluating their potential liability. EPA is not ready to speak to this issue specifically regarding Sunnyside or any other PRP's liability at this time.

7. From comments made at the Stakeholders meeting, one could conclude that, with a bulkhead in the Red and Bonita and the development of a designed wetlands, these steps might provide the necessary cleanup without superfund designation. Is that a correct assumption?

No. If it is decided that a bulkhead in this mine is appropriate, this is not, by itself, expected to be sufficient to reduce the metals concentrations and loads in the Animas River to be protective of aquatic receptors. The comments made regarding the reduction in metals being significant relative to the water quality standards simply meant that, at certain times, such as was observed in October 2012, certain metals may be reduced to below the standards, if the bulkhead resulted

in complete removal of that source.

The main point of Steve Way's presentation during the recent ARSG meeting was to show that the Red and Bonita is a significant contributor to the water quality problem in the Animas, especially during the base flow period, such as in October. His comments were not intended to convey that the Red and Bonita is the only significant source or that dealing with the Red and Bonita alone will correct the condition in the Animas through all seasons of any given year.

8. What would be the timeframe and process for completing the bulkhead and wetlands? Where is the funding coming from and when would we know if it was successful? If it doesn't work what is plan B?

If Removal Program funding is available, it is possible that the bulkhead could be constructed in 2015. Installing the bulkhead would give EPA time to monitor the effects of the bulkhead on the system while the Site was listed, the RI was conducted and additional remedial measures could be evaluated and if necessary pilot tested. The impacts of mine tunnel plugging or passive treatment systems will need to be monitored for several years before it can be determined that the measures are performing as intended and that other measures are not needed.

QUESTIONS THAT WILL LIKELY COME UP W/SJ COMMISSIONERS THAT WE SHOULD BE PREPARED TO ANSWER

9. CERCLA response effectiveness. Do the data suggest that there is sufficient impact from mining related sources vs. background that we can make a significant difference (i.e. can anybody fix the problem, such that we achieve water quality standards)

Determining background in a highly mineralized zone like the San Juan Mountains that has been extensively mined is a highly complex task and will likely have some uncertainty associated with it. The amount of improvement in water quality in the Animas River will depend on the specific goals to improve the water quality and how achievable the remedial measures are given limits in financial resources and treatment technologies.

The data do show a significant impact to the water quality and fishery in the Animas River. A portion of that can be attributed to mining related sources but determining how much will be one of the tasks to be performed during the RI.

10. Is listing the most effective route to achieving an improvement or are there other options to consider (i.e. the BLM works on mine sites outside NPL listing).

Based on the data collected over the last 10+ years, it is clear to us that:

- There are multiple sources contributing to water quality degradation in the Animas River including some in the upper Animas above Silverton.
- Conditions are getting worse in that water quality in the Animas below Silverton has degraded.
- While we believe a bulkhead at the Red and Bonita would reduce a significant source of loading to Cement Creek, it would not alone correct the conditions in the Animas.
- While EPA and the BLM have been successful in addressing mining impacted sites by

using a series of removal actions, we don't think it is the best option here because most (if not all) of the technologies that may be applicable at the Upper Animas site would require some long-term operation and maintenance – even in the case of passive treatment systems.

11. Since Congress is cutting the budget, how will EPA fund the studies and cleanup work for this Site if it's listed?

- EPA has an enforcement first policy. Thus, EPA seeks to have all potentially responsible parties pay for the cleanup. The reality is that not all PRPs are viable, and depending on the nature and extent of the contamination and the sources of the problem, not all PRPs are responsible for all the problems. So, enforcement is not likely to lead to funds for all the studies and cleanup costs
- It is true that EPA's budget is being decreased, so EPA cannot guarantee a certain level of funding each year.
- EPA hopes to settle with PRPs who will be able to fund the work with a cash-out or by performing the work themselves with EPA oversight.
- Regardless of whether the site is listed, EPA can proceed with the RI/FS only to the extent the RI/FS budget allows. Once the site is listed, however, it would then be eligible for cleanup funds from the Superfund remedial action budget. Both of these activities can proceed while settlement negotiations are occurring.

12. Why would EPA broaden the Site beyond Cement Creek that was previously envisioned?

- EPA defines the Site boundaries as the extent of contamination (i.e., where the contamination has come to be located) during the remedial investigation phase.
- We may need to look at the other reaches of the Animas River above or below Silverton for other man-made sources that are contributing to degradation in water quality.
- Superfund requires EPA to evaluate risk to both human health and ecological receptors.
- Up to this point all of our collective efforts have been focused on water quality. EPA's experience has shown us that smelter operations can leave elevated lead and arsenic in soils, which can pose a serious risk in residential areas or areas with high recreational use. At other sites, we have also found that waste rock and mill tailings have often been used for roads and as fill round the community. We would be negligent, if we did not evaluate the potential risk to human health as part of defining the site.
- Recent analytical results from the Targeted Brownfields Study and the state-administered Voluntary Cleanup Program for the Rose Walsh smelter site showed elevated levels of lead and arsenic in the surface soils. Those levels necessitated a cleanup of soils in that area in anticipation of the development of affordable housing in Silverton.
- Additional smelters operated in Silverton that could also have contributed to widespread soil contamination.
- An ecological risk assessment should also include an assessment of the risk for

terrestrial receptors that may be impacted by the elevated levels of metals in the soils and mine waste. To date, we have not specifically evaluated risk to terrestrial receptors.

13. Why would EPA be looking at public health at this site?

As part of the Superfund process EPA is required to look at both ecological as well as human health impacts so that a selected remedy is protective of both human health and the environment. During the site characterization process EPA not only does sampling to identify ecological impacts but also for potential human health impacts, such as contaminated soils that may be in public and/or residential areas.

14. Are you saying we may be exposed to contamination?

- Some limited soils data presented in a Site Inspection report by CDPHE in 1999 suggested that there may be a public health risk in the residential soils. A soil sample collected during the site inspection showed a lead concentration of 1840 ppm. Generally, lead levels in residential soils above 400 ppm are of concern to EPA.
- The recent Targeted Brownfields investigation and VCUP cleanup at the Rose Walsh smelter site showed levels of lead in soils up to 34,600 ppm at the surface. The human health risk evaluation in 2006 determined that lead and arsenic levels were above the State's cleanup levels for residential and open space use which necessitated the VCUP cleanup.
- USGS's report E2 of the professional paper No. 1651 includes imaging spectroscopy of the mining district in town. The results of this imaging show mine waste was used in town for the roads.

15. How would EPA go about identifying whether there are human health exposures?

- EPA would likely begin with sampling soils around Silverton – perhaps initially sampling some public areas like the parks or school grounds.
- We would also work with the county and state health agencies for available public health testing information regarding instances of elevated blood lead concentrations, which might indicate the potential for a soil contamination problem.
- If some of these initial efforts indicated a potential problem, we would move forward with further sampling and investigation of potential exposure to contamination sources.

Any Additional Questions we should answer????

POINTS TO MAKE TO COMMISSIONERS:

1. The NPL listing should include a broader view of the Upper Animas watershed to ensure that we address all the significant risks that will result in improved water quality in the Animas River.
2. If the Site is listed, EPA is required to evaluate the risk to both humans as well as ecological receptors.
3. Without evaluating the risk to humans from residual mining waste in Silverton, we do not know if there is contamination in Silverton that is of concern.
4. EPA is committed to continuing to work with the community and ARSG, but without a NPL listing, EPA funding to address contamination will be very limited.

The Commissioners are in a place where they really want to see something happening.